ABSTRACT

[1082]   Techniques are provided to support successive interference cancellation (SIC) receiver processing with selection diversity whereby each of N_T transmit antennas may be turned on or off.   One symbol stream may be transmitted from each transmit antenna.   A SIC receiver recovers the transmitted symbol streams in a specific order.   Up to $N_T!$ orderings are evaluated.   For each ordering, N_T post-detection SNRs are obtained for N_T transmit antennas and used to determine N_T data rates, where the data rate is zero if the post-detection SNR is worse than a minimum required SNR.   An overall data rate is computed for each ordering based on the N_T data rates.   The ordering with the highest overall data rate is selected for use.   Up to N_T symbol streams are processed at the data rates for the selected ordering and transmitted.   The transmitted symbol streams are recovered in accordance with the selected ordering.